THE IMPACT OF NATIONAL MACRO-ENVIRONMENTAL VARIABLES ON TOURISM SERVICES CONSUMPTION IN ROMANIA

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Abstract: *The studies of consumers' demand represent the main objective of market research, the importance of these studies being emphasized in all marketing literature. In order to better understand the complex mechanisms of changing the needs for goods or services into demand, the marketing theory includes studying the consumer behaviour as regards tourism goods and services.*

Key words: *consumption, tourism goods and services, regression.*

As tourism developed, it has progressively built a market of its own that can be defined by factors with specific manifestation, i.e. economic, social, political, geographical and motivational factors. A general definition of the tourism market can be: the sphere of interference between economy, materialized by tourism production, and demand in tourism, materialized by consumption. Due to the fact that tourism production coincides with consumption, but not with the place of demand occurance, the interference will progressively lead to the overlapping of the two components, by means of tourism consumption.

The economic-social factors that mark the demand and consumption in tourism are:

- *The income of the population* is, according to most of the specialists, the main condition of the manifestation of demand in tourism.

- *Price and tariff* are a distinguished major factor to stimulate tourism demand. The price has a multi-plan influence, as a result of the tourism activity complexity.

- *The offer in tourism* comprising attractions (natural and human made), equipment and labour force, also known as factorial appropriation, acts directly on tourism consumption and on the phenomenon per se.

- *Technical progress* is a different phenomenon with implications in developing tourism, and consequences on the degree of mobility of the population, facilitating travelling in the interest of tourism. It also acts on other phenomena, such as: urbanization, industrialization, environment quality, which have all an impact on tourism.

- Circulation in tourism also varies in correlation with the *demographic evolution,* and with the dynamics of the

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population and mutations in the structure on age, profession, environment, and so on. It is generally considered that the numeric increase of the population, as well as its rhythm of growth, influence the number of potential clients. Research in this direction shows that such a correlation is only possible in countries with a high economic level, where the material conditions for the inhabitants' journey can be ensured.

- *The urbanization process* determines a series of mutations in the structure of the population's needs. Besides numerous advantages visible in the economic development and increase in living standard, the urban concentration also has negative effects, such as the deterioration of the environment and the increase of nervous pressure and stress. This triggers the need to escape from great, unpolluted, urban agglomerations towards quiet places, for rest, recreation, fun. This need becomes manifest at the end of the week, or during holidays, and it stimulates the mobility of the population, contributing to the intensification of the tourists' circulation.

- *Spare time* is another determining factor of tourism, its evolutions setting conditions in the affirmation and manifestation of demand in tourism.

The progresses of economic development has lead to an increase in spare time, based on the diminution of the number of labour hours per day down to only 8 and even less, reduction of the working days, promoting more and more successfully part-time work, institutionalization, generalization and increase in annual holidays, reduction of the total working time during life.

In the category of *psycho-social factors,* a greater influence is visible in tourism from areas such as *fashion, tradition, desire of knowledge, training.* For example, fashion plays an important part in choosing the destination for a holiday or the form of tourism (rural, ski, circuits etc.). Peoples' traditional holidays and festivals contribute to the attraction in the circuit of new segments of population and determine a new orientation of the flows. Even scientific, cultural or sports manifestations, or of other nature, stimulate the interest in travelling, amplifying circulation in tourism.

Governmental actions and facilities given by tourism operators have a significant influence on tourism, encouraging and promoting vacations. This category includes: legislation in tourism, which may limit or stimulate travelling, international agreements, alignment to the international hotel classification, customs formalities, and visa giving system, tour-operators, and travel agencies.

In what follows we aim at analyzing exactly the way national macro-environmental variables (the most important ones) influence tourism consumption in Romania, the selection of the most important components as well as the intensity of their impact on tourism consumption. In order to create such an analysis we use one of the statistical methods meant to emphasize the way a given variable is or is not influenced by other variables. This is a regression analysis.

The regression analysis is generally part of the multivariate methods group, and at the same time, an explicative method of

analysis due to the fact that a dependent variable is explained by means of other independent variables.

The resultant feature y will be the one that expresses tourism consumption (tourism revenue), and the most relevant factorial features x that express national level of economic development are: monthly average nominal income in comparable values (lei per employee); occupied population in Romania (absolute values); unemployment (%); inflation (%); investments (billion lei, constant prices); urban Romanian population (%); crime rate per 100,000 inhabitants; number of cars in circulation (absolute values); GDP per inhabitant in comparable values (thousand lei).

Mass social phenomena are very complex, depending on a large number of conditions and causes. The form of manifestation of these phenomena depends on the way in which the causes that determine them are associated, meaning that more causes can lead to the appearance of a given effect. Most frequently, the way the resultant feature y varies expresses not only the influence of the determining factors (x), but mostly, the interaction between them. This interaction determines the degree of influence of different factors as regards the variation from one unit to another, and the general influence of a given factor to be revealed by means of another factor that is not part of the interdependence.

We shall analyze the existent connection between tourism revenues (as an indicator of tourism consumption) as resultant feature (or dependent variable) and the indicators of the macro-environmental factors mentioned above, as factorial features (or independent variables).

Using the SPSS program package, the results in the case of multiple regression are:

Table 1.

Model Summary^c

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,733^a	,537	,479	54,63489
2	,977^b	,955	,942	18,19573

a. Predictors: (Constant), Populatia ocupata a Romaniei in perioada 1996-2005

b. Predictors: (Constant), Populatia ocupata a Romaniei in perioada 1996-2005, Investitii (miliarde lei, preturi constante)

c. Dependent Variable: Incasari realizate in turism in perioada 1996-2005 (miliarde lei preturi constante)

The values of the determining coefficients

In the above table, there is a brief presentation of the results of the two models. The first variable, the occupied population in Romania, explains about

54% of the variation of the dependent variable, while for the second model, when considering the variables *occupied population in Romania* and *investments in economy,* the explained variation reaches 95%.

The summary of the model presented above emphasizes that the standard error of the estimation is 54.63 billion lei for the first model and 18.19 billion lei for the second model. It results that most of the total variance is generated by the regression equation. If we report the variance owed to the regression (SSR) and the total variance, we obtain the determination coefficient R^2, emphasized in the table of determination coefficients values.

$$R^2 = \frac{SSR}{SST} = \frac{27688,25}{51568,02} = 0,537$$

In the first model, 53.7% of the total variance is explained by the regression model and 46.3% by unknown factors, the respective variance representing the error (SSE).

$$R^2 = \frac{SSR}{SST} = \frac{49250,43}{51568,02} = 0,955$$

In the second model 95.5% of the total variance is explained by the regression model and 4.5% by unknown factors.

The analysis of the variance for multiple regression will start from the following results:

Table 2

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	688,252	1	27688,252	9,276	,016[a]
	Residual	879,772	8	2984,971		
	Total	568,024	9			
2	Regression	250,432	2	24625,216	74,377	,000[b]
	Residual	317,592	7	331,085		
	Total	568,024	9			

[a].Predictors: (Constant), Populatia ocupata a Romaniei in perioa

[b].Predictors: (Constant), Populatia ocupata a Romaniei in perioa Investitii (miliarde lei, preturi constante)

[c].Dependent Variable: Incasari realizate in turism in perioada 19 preturi constante)

The ANOVA analysis of the variance

On the basis of the information above, a growth of F calculated is noticeable, from 9.27 to 74.38, which strengthens the statistical significance of the regression explanation of the dependent variable variance.

Table3

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	% Confidence Interval fo	
		B	Std. Error	Beta	t	Sig.	ower Bound	Upper Bound
1	(Constant)	053,287	429,725		-2,451	,040	-2044,235	-62,339
	Populatia ocupat Romaniei in perioada 1996-2	519E-04	,000	,733	3,046	,016	,000	,000
2	(Constant)	597,210	158,193		-10,097	,000	-1971,278	-1223,142
	Populatia ocupat Romaniei in perioada 1996-2	894E-04	,000	,913	10,979	,000	,000	,000
	Investitii (miliarde preturi constante	1,496	,185	,671	8,070	,000	1,058	1,934

a. Dependent Variable: Incasari realizate in turism in perioada 1996-2005 (miliarde lei preturi const

Regression coefficients

The information above contains the intercepts' values and the regression coefficients which the regression equations in the two phases are based on.

1. $\hat{y} = -1053{,}287 + 0{,}00015 * x_1$, where x_1 is the occupied population in Romania

2. $\hat{y} = -1597{,}21 + 0{,}00018 * x_1 + 1{,}49 * x_2$, where x_2 represents the investments in economy

The multiple correlations above aimed at analyzing the existent connection between tourism revenues in our counties between 1996 and 2005 and a series of macro-environmental variables that can have a significant influence on the volume of the revenues. Due to the strong interdependence between these independent variables, the model finally retains only two variables that have the highest influence on the revenues in tourism. These two variables are *occupied population in Romania* and *investments in the national economy.*

The occupied population in Romania has a great influence on the demand and consumption in tourism. Therefore, we may conclude that the demand for tourism services is influenced by the **level of occupied population**. The fact that the model also retained the investments in economy leads us to the conclusion that demand and consumption in tourism are influenced by economic variables, related to the income and economic development.

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